EMPLOYEE INFORMATION ON HAZARD COMMUNICATION

1. INTRODUCTION

The purpose of the OSHA Hazard Communication Standard is to insure that the hazards of all chemicals produced or used by CTA are evaluated and that information concerning their hazard is provided to you, the employee.

The following information is intended to provide you with a basic summary of the Hazard Communication and to outline your basic rights. Because of various state rules, there may be some variations of the enclosed information. If you have any questions concerning the materials you work with or the information in the section, please contact the Director of Maintenance or the Safety Supervisor.

2. BASIC EMPLOYEE RIGHTS

The Hazard Communication is intended to ensure that communications on hazardous chemicals exist between employee and employer. Under this rule you have certain rights, including.

1. Access to Material Data Safety Sheets (MSDS). Copies will be readily available to you at the Shop Office or the Safety Supervisor's Office.
2. Containers of hazardous substances will be labeled with the chemical name and appropriate warnings.
3. If the exact chemical name of a material is not provided because it is a trade secret, you still will be informed of all safety and health information for that chemical.
4. In general, you have the right to know what you are working with and any precautions that may be necessary to safeguard your health.
5. As stated in 29 CFR 1910.20, Subpart C, you have the right of access to your medical and exposure record.

3. HAZARD COMMUNICATION STANDARD – SUMMARY

A. Scope and Application

The Hazard Communication Standard applies to all employers and employees. Employers in the public and private sector Must establish a written hazard communication program for Their employees. Suppliers of hazardous chemicals are re-Quired to transmit hazard information to their customers.

B. Exemptions

The rule does not cover potentially hazardous chemicals that Are brought into the workplace for the personal use of an employee such as food, prescription drugs, cosmetics, or tobacco products. The rule also does not apply to:

1. Tobacco and tobacco products.
2. Articles (finished products)
3. Hazardous waste.
4. Alcoholic beverages.
5. Food, Drugs, and Cosmetics.
6. Consumer products or Hazardous Substances.
7. Medicine.

These are generally regulated or covered under other acts.

C. DEFINITIONS

The Standard contains many definitions and they are listed in Section (C) of the Hazard Communication Standard.

D. SPECIFIC REQUIRMENTS

1. Hazard Determination.

Chemical manufacturers are required to evaluate material Produced or used in their workplace to determine if they are Hazardous. Manufacturers and employers must identify and Consider all available scientific evidence in making this Determination. Any written procedures used to determine The hazard of a chemical are available to you upon request.

2. WRITTEN HAZARD COMMUNICATION PROGRAM

Employers must develop and implement a written hazard communication program for their workplace, describing how the requirments for labels and other forms of warning, Material Safety Data Sheets, and employee information and training will be met.

3. LABELS AND OTHER FORMS OF WARNING

The chemical manufacturers shall ensure that each container of hazardous materials is labeled, tagged, or marked with the following information:

a. Identity of the hazardous chemical or material.
b. Appropriate hazard warning.
c. Name and address of the chemical manufacturer, importer, or other responsible party.

An employer must meet the first two requirements, if it has not already been done by the manufacturer. An employer may use signs, placards, process sheets, etc., instead of affixing labels to individual stationary process containers. An employer is not required to label portable containers if they are intended for immediate use.

4. MATERIAL SAFETY DATA SHEETS (MSDS)

Chemical manufacturers and users must obtain or develop a Material Safety Data Sheet for each hazardous chemical used. The MSDS must be provided with the first shipment, and the employer must maintain copies of the sheets. The MSDS must be readily available and accessible to employees.

5. EMPLOYEE INFORMATION AND TRAINING

You have a right to information and training on the hazardous chemicals you use. This basic information includes:

a. Physical and health hazards of chemicals used in your work area.
b. The location and availability of the written hazard communication program, required list of hazardous chemicals, and MSDS sheets.
c. Methods, observations, and monitoring data that are used to detect and measure the presence or release of hazardous chemicals.
d. Measures you can take to protect yourself from exposure.
e. In general, you should feel confident and knowledgeable about the materials and processes with which you work.

Questions can be answered by contacting the Director of Maintenance or the Safety Supervisor.

4. MATERIAL SAFETY DATA SHEETS

A Material Safety Data Sheet contains information that is useful to many people. Safety specialists, Health personnel, workers can use this information to determine how the hazardous chemicals are to be handled in different situations and use.

How to read and use a Material Safety Data Sheet

MSDS sheets communicate the degree of hazard in three (3) different categories: Health, Flammability, and Reactivity.
Section 1 identifies the manufacturer, the product, emergency telephone number, and the person preparing the MSDS.
Section 2 lists the ingredients as being hazardous or harmless.
Section 3 lists the physical data, such as the boiling point, the evaporation rate, vapor density, volatility, weight, appearance and odor if applicable.
Section 4 lists the fire and explosion data which includes the flash point, flammable limits, extinguishing media, special fire fighting procedures, and unusual fire or explosion hazards.
Section 5 contains health hazard data. It list the effects of overexposure, medical conditions effected by exposure, how the substance enters your body, toxicity, and emergency and first aid procedures.
Section 6 covers reactivity information.

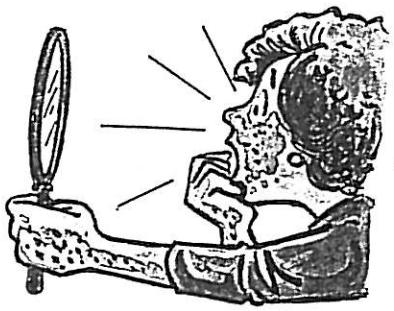
Section 7 lists procedures to follow in case of a spill or leak.
Section 8 contains information on safe handling and use.
Section 9 lists any special precautions that need to be taken.

play it SAFE...

Handle Hazardous Materials With Care

Why bother to learn about hazardous materials?

Joe didn't pay attention to a "NO SMOKING" sign. There were flammable materials nearby. His cigarette caused an explosion and fire. Joe and several of his co-workers ended up in the hospital, and the plant was badly damaged.



Carol didn't read the warning label on a container of cleaning fluid. As a result, she didn't take the proper precautions when using it. She paid the price for her carelessness with a painful case of dermatitis.

Sam didn't bother to find out more about the chemicals he was handling. He figured that since his job was just to unload and store closed containers he didn't have to worry. But when a container leaked, Sam had no idea what to do. By the time he found out, the spill was already dangerously out of control.

Kathy didn't take the time to ask her supervisor the questions she had about her new job. So she went ahead and added too much acid into the solution used for soaking metal casings. And she paid no attention when some of the solution splashed on her. But when it burned through her clothes to her skin . . .

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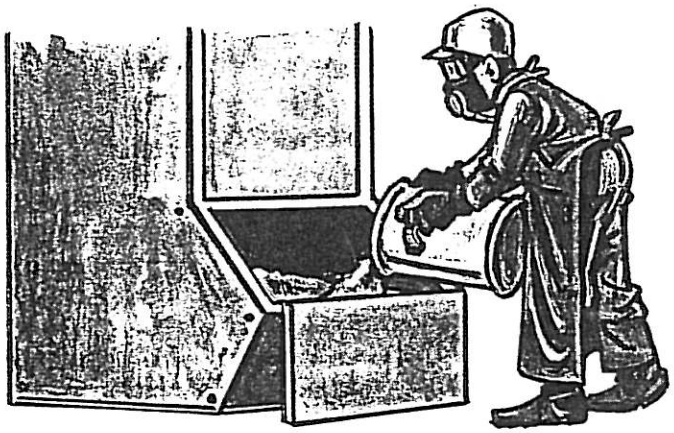
Working with hazardous materials doesn't have to be harmful—*if* you take the right precautions...



Whatever your job duties, you have one other very important responsibility.

You are responsible for your safety—and the safety of your co-workers.

Even though your company takes many steps to protect you at work, it can't do the whole job by itself. That's why you need to know all you can about potential hazards and how to work with them.

THIS BOOKLET WILL HELP YOU WORK SAFELY WITH HAZARDOUS MATERIALS.
PLEASE READ IT CAREFULLY AND KEEP IT HANDY.

2

What makes some materials hazardous?

Materials can be hazardous in several ways:

- **Toxic** Most chemicals are toxic at some level of exposure. If allowed to enter the body through the nose, mouth, or skin, they can make you sick. Fumes, dust, and vapors from toxic materials can be especially harmful because they can be inhaled and pass quickly from the lungs into the blood, allowing the poisons to circulate throughout the body.

- **Corrosive** Materials like strong acids and bases can eat right through other substances—including your clothing. If splashed on the skin or eyes, they can cause serious burns. Some of these materials can break down into poisonous gases, making them doubly hazardous.

- **Explosive** Some materials can explode when they are exposed to heat or flame. Included in this category are materials like flammable liquids and compressed gases, which can explode under certain conditions.

- **Flammable** This category includes all materials that catch fire easily, burn rapidly, spread quickly, and give off intense heat. Many materials used and stored in the workplace are flammable, including many solvents and lubricants.

- **Reactive** These materials have to be isolated, stored in special containers, and used with extreme caution. Some can burn when exposed to air or water—and some when mixed with other substances. It's important to note that reactive materials don't have to be near heat or flames to burn. They burn *spontaneously*. They can also give off vapors that can be hazardous if inhaled.

What you need to do To protect yourself when handling hazardous materials, you should always follow four simple rules . . .

- ★ Pay attention to warning signs.
- ★ Read all labels carefully.
- ★ Get additional information when in doubt.
- ★ Ask your supervisor whenever you have *any* questions about handling or working with any hazardous material.

3

Rules for working safely with hazardous materials

These four rules apply when handling any type of hazardous material. Let's review them to see exactly what steps you need to take to protect your safety.

RULE 1. PAY ATTENTION TO WARNING SIGNS. They tell you hazardous materials are present and what you should and shouldn't do around them. Make sure you pay attention to what these signs tell you.

RULE 2. READ ALL LABELS CAREFULLY. You should always read the labels on the containers of materials you handle. If no label is present, do not use the material until you've learned the necessary safety precautions. Why? Because each label will tell you many important things. The first two items must be on all in-house labels—although some labels might show more information. For example:

- **What is in the container**
- **Possible hazards**
- **Precautions you must take**
- **Symptoms of overexposure**
- **What to do in case of overexposure**
- **Where to find further information and instructions**
- **Safety equipment to use**

ACETONE

DANGER!

EXTREMELY FLAMMABLE. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION.

Keep away from heat, sparks, flame. Avoid contact with eyes, skin, clothing. Avoid breathing vapor. Keep in tightly closed container. Use with adequate ventilation. Wash thoroughly after handling.

EFFECTS OF OVEREXPOSURE: Contact with skin has a defatting effect, causing drying and irritation. Overexposure to vapors may cause irritation of mucous membranes, dryness of mouth and throat, headache, nausea and dizziness.

FIRST AID PROCEDURES: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If contacted, immediately flush eyes with plenty of water for at least 15 minutes. Flush skin with water. If swallowed, if conscious, immediately induce vomiting.

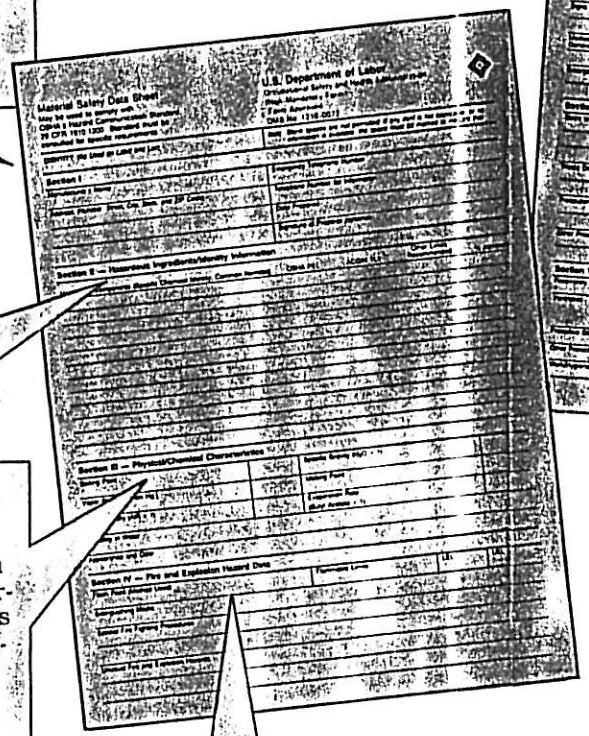
Consult MSDS for further hazardous information and instructions.

RULE 3. GET ADDITIONAL INFORMATION WHEN IN DOUBT. Because not all labels provide you with all the information you may need, you should turn to the Material Safety Data Sheet—or MSDS—for that chemical. *What is an MSDS?* It provides vital information about the hazardous materials in your work area. Your supervisor can tell you where to find the MSDS you need. [**PLEASE NOTE:** The MSDS forms used in your work area will generally contain the information outlined below, but the form may look different. *Ask your supervisor if you have questions about an MSDS.*]

1 Identity. The first section of the MSDS tells you the name of the chemical. This is the same name that's on the container's label.

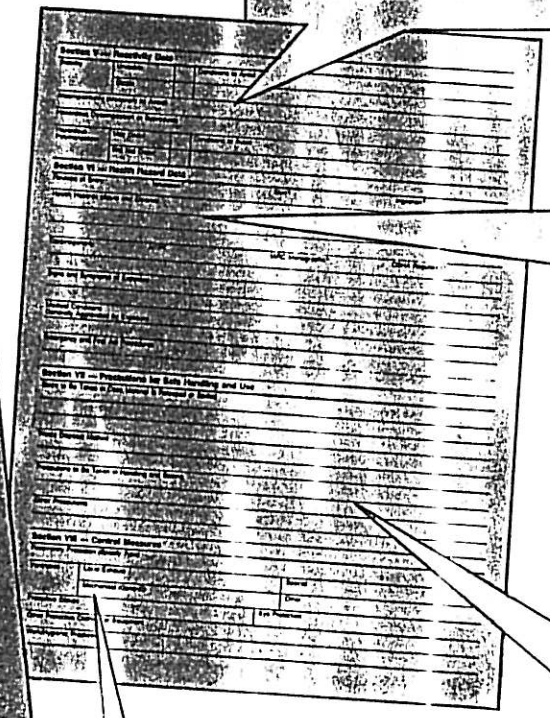
2 Hazardous Ingredients. This section tells you the chemical names for all the substances that make up this particular hazardous material.

3 Physical/Chemical Characteristics. Another section provides additional important information concerning the material's appearance and odor of the material, its boiling point, vapor pressure, vapor density, solubility in water, melting point, and evaporation rate.



4 Fire and Explosion Hazards. The MSDS will also tell you when the material might catch fire or explode and what you can do to deal with these hazards. Special instructions are included here.

5 Reactivity. Some materials can burn or explode when exposed to air or water—or when mixed with other substances. These materials are *reactive*, and this section tells you the conditions under which these materials become dangerous, so that you can avoid exposing the material to these conditions.



6 Health Hazards. This is another very important section, because it tells you how the hazardous material could harm you. It tells you the symptoms of overexposure and the emergency first-aid procedures to use in case of overexposure.

7 Precautions for Safe Handling and Use. Perhaps most important of all, this section contains detailed instructions for safe handling of the substance. It tells you how to store, move, and use these materials. In addition, this section tells you what to do in case of a spill or leak.

8 Control Measures. This section tells you what personal protective equipment to use when working with the material. It also lists safe work procedures and tells you how to clean up after working and before eating so that the material won't harm you or contaminate your food.

There is an MSDS for every hazardous material in your workplace. Each MSDS provides you with valuable information about protecting yourself and your co-workers when working with or near the material. Make sure to read the MSDS for each hazardous material in your workplace and find out everything you need to know to work safely with these materials.

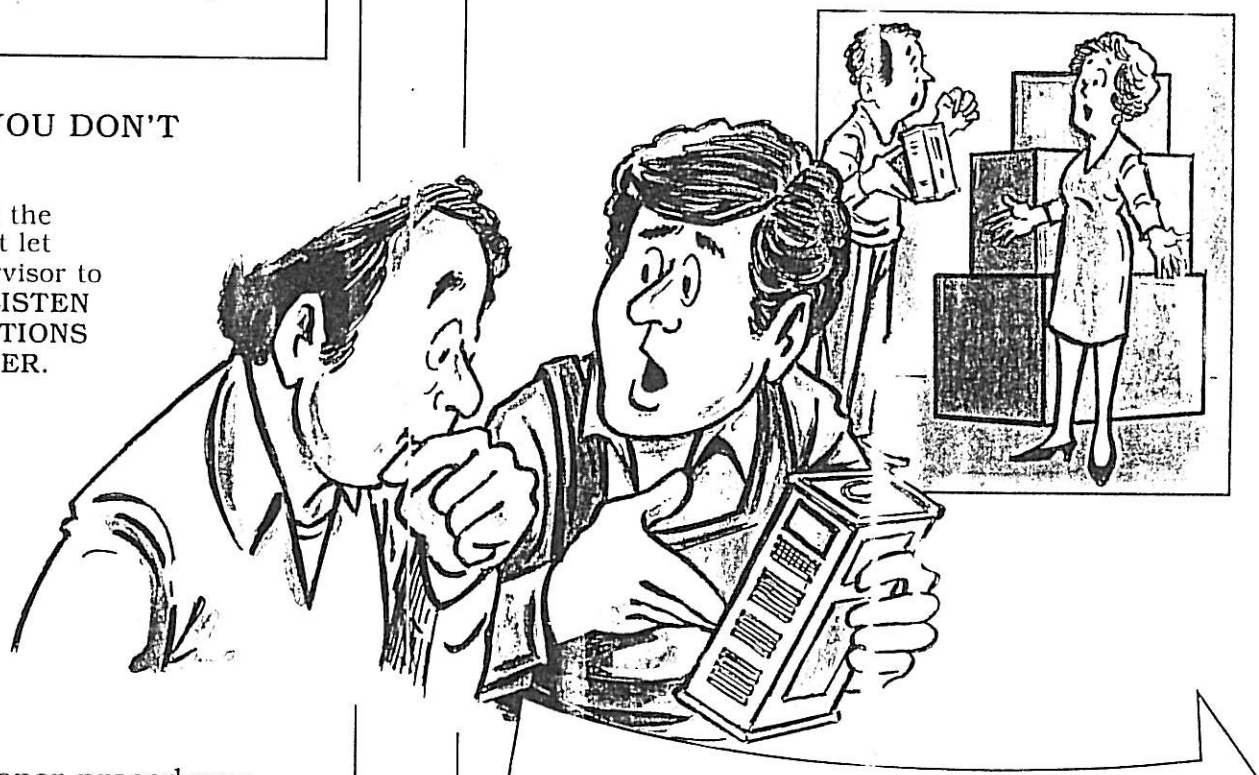
RULE 4. ASK QUESTIONS IF YOU DON'T UNDERSTAND.

If after reading the warning label and the MSDS, you still have questions—don't let them go unanswered! Ask your supervisor to explain. Then remember, ALWAYS LISTEN TO YOUR SUPERVISOR'S INSTRUCTIONS AND FOLLOW THEM TO THE LETTER.

You're in doubt about the proper procedures for handling or use.
You're not sure what safety equipment to use or what other precautions to take.
You don't completely understand the safety rules.

And remember, ask your *SUPERVISOR*—not a co-worker. Your co-worker may not know the *correct* answer to your question. Don't take the chance. Ask your supervisor when you're in doubt about how to handle a hazardous substance.

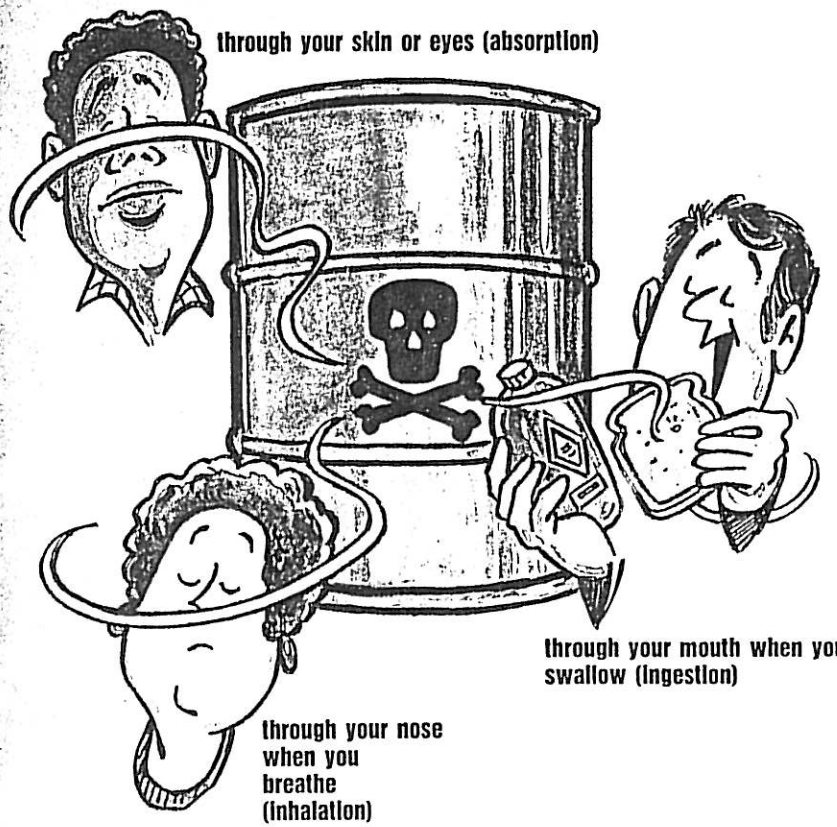
By following these four simple rules, you will be helping to protect yourself and your co-workers against material hazards on the job.



BUT YOU STILL NEED TO KNOW MORE. YOU NEED TO KNOW THE ANSWERS TO SOME VERY IMPORTANT QUESTIONS . . .

What should you do to protect your health?

Hazardous materials can be harmful when handled carelessly. If they are allowed to enter your body, they can make you sick. Hazardous materials enter your body in several ways:



What you need to do That's why you must take steps to protect yourself from contact or exposure by doing the following:

- Use the protective equipment required by your employer—and use it properly and routinely.
- Keep work areas and tools clean.

Keep work clothes clean and make sure they are in good condition. (Holes and tears allow chemicals to come in contact with the skin.)
Never wear clothes or safety equipment that has been contaminated by hazardous materials.
Remove contact lenses when entering work areas where chemical vapors may be present.
Wash according to instructions if any hazardous material splashes on you.
Always wash before applying makeup or lotion, and before putting on rubber gloves.
Wash at the end of your shift.
Smoke, eat, or drink only in designated areas--NEVER around hazardous materials. And be sure to wash first.
Dispose of all chemicals, contaminated rags, etc., according to required procedures—usually into a covered container for daily disposal. But never assume that any covered trash container is to be used. Ask your supervisor.
Clothing worn while handling hazardous materials should never be mixed with home laundry.

Overexposure to hazardous materials can:

- make you feel dizzy
- make you sick to your stomach
- make your eyes, nose, and throat irritated
- give you skin rashes
- make you feel especially nervous, agitated, or sluggish

IF YOU FEEL ANY OF THESE SYMPTOMS WHILE WORKING WITH OR NEAR HAZARDOUS MATERIALS—*NOTIFY YOUR SUPERVISOR IMMEDIATELY.*

What should you do in case of a leak or spill of hazardous materials?

IN CASE OF EMERGENCY, FOLLOW YOUR COMPANY'S ESTABLISHED RESPONSE PROCEDURES. Depending on your job duties and responsibilities, you may also need to know some of the emergency control measures listed below.

➡ EMERGENCY INFORMATION ➡ Find out from your supervisor what you need to know in the event of an emergency. Do you know:

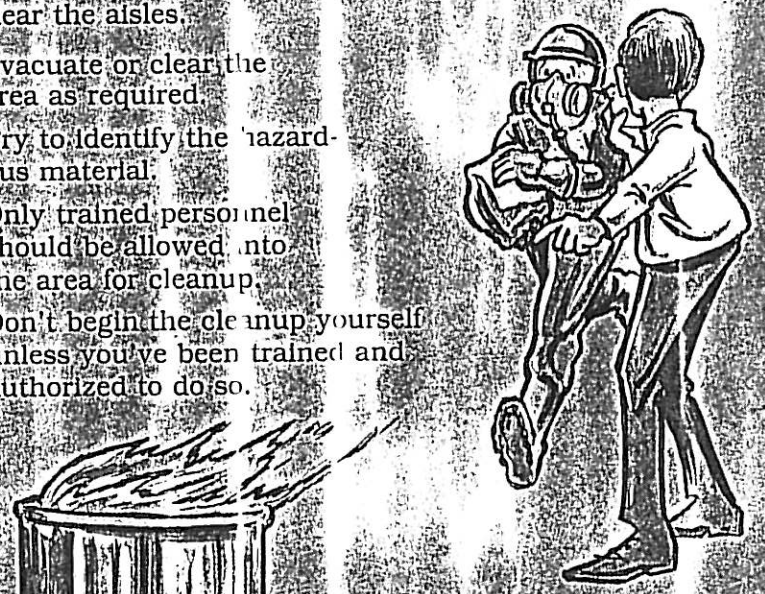
- ✓ Emergency phone number(s) to call for assistance (or otherwise how to sound the alarm)?
- ✓ Methods for controlling the spread of a spilled substance?
- ✓ Proper equipment shutdown procedure?
- ✓ Evacuation routes and assembly area?

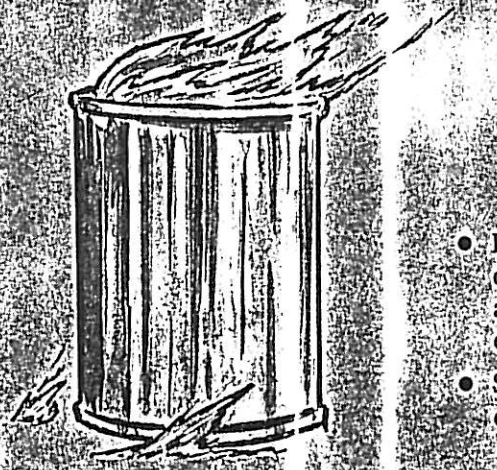
Emergency personnel will be trained in:

- Emergency cleanup and disposal measures
- Required protective equipment
- Use of cleanup equipment
- Fire-fighting techniques and other emergency measures (first aid, for example)
- Use of other emergency equipment

➡ What you need to do ➡ In addition to the basic information listed above, here are the steps you can take in response to an emergency leak or spill of hazardous materials. *(The exact order in which you may need to do these things depends on what your supervisor has told you.)*

- Sound the alarm.
- Without endangering yourself, try to stop the flow of hazardous materials and prevent a spill from spreading.
- Notify your supervisor immediately.
- Call the emergency number(s) you've been given.
- Assist as directed—for example, clear the aisles.
- Evacuate or clear the area as required.
- Try to identify the hazardous material.
- Only trained personnel should be allowed into the area for cleanup.
- Don't begin the cleanup yourself unless you've been trained and authorized to do so.





- If you are involved in the cleanup be sure to wear appropriate protective equipment.
- Shut down designated equipment as instructed.

When you follow the proper precautions, you can work safely and effectively with hazardous materials. To help you review the information covered in this booklet, here are three job checklists you can use whenever you have a job to do that involves handling hazardous materials. Post them at your workstation, so you'll always remember what to do.

Before you start the job...

- ☐ Use the safety equipment required by your employer.
- ☐ Check your clothing and gear for signs of wear.
- ☐ Remove contact lenses if vapors might be present.
- ☐ Pay attention to all warning signs.
- ☐ Read the label on every container you handle.
- ☐ Check with your supervisor before handling any container with which you are not familiar.
- ☐ If you are unfamiliar with a hazardous material, be sure to read the MSDS for that material.
- ☐ Take all precautions recommended on the label or in the MSDS.
- ☐ Ask your supervisor for more information if there is anything you don't understand.
- ☐ Make sure you know how to get help in case of an emergency.
- ☐ Review first-aid procedures and know where emergency stations are located.
- ☐ Make sure you know where fire extinguishers are kept.
- ☐ Know where the nearest emergency exits are located.

While you're working...

- ☐ Follow established work procedures to the letter.
- ☐ Obey all department safety rules.
- ☐ Keep alert, concentrate, and watch for potential hazards.
- ☐ Be careful when moving containers of hazardous materials.

- ☐ Don't take shortcuts.
- ☐ Make sure hazardous materials are properly stored according to company rules.
- ☐ Don't store materials in aisles, or where they are blocking exits.
- ☐ Make sure all containers are stored with labels showing.
- ☐ Make sure flammable and combustible materials are not stored near a heat source.
- ☐ Check for adequate ventilation.
- ☐ Eat, drink, and smoke only in designated areas.
- ☐ Double-check all containers and hoses to make sure they're not leaking.
- ☐ Keep containers closed when not in use.
- ☐ Make sure all lids or caps are tightly closed before storing.
- ☐ Keep alert to signs of trouble—unusual odors, hidden leaks, etc.
- ☐ Report missing labels, damaged containers, etc., to your supervisor.
- ☐ Never try to do a job you are not authorized to do.
- ☐ Get help from your supervisor or a co-worker if you need it.
- ☐ Clean up all spills immediately, following established procedures and using approved cleanup materials.

After the job is done...

- ☐ Clean up your work area and any tools you've used.
- ☐ Be sure to dispose of all hazardous substances and contaminated cleaning materials according to the rules.
- ☐ Remove contaminated work clothing and do not wear it again until it's been cleaned.
- ☐ Be sure not to wash work-contaminated clothing with your family laundry.
- ☐ Wash carefully after handling chemical containers, before eating, or when leaving your work area.
- ☐ Report any problems encountered on the job to your supervisor.
- ☐ Make sure all hazardous materials have been returned to their proper place and stored correctly with labels showing.

Do you know what these words mean?

Acid—a compound with a pH less than 7.

Alkali—a compound with a pH greater than 7. Also known as a *base* or *caustic*.

Boiling Point—the temperature at which a liquid becomes a gas.

Chemical—any element, compound, or mixture of elements and/or compounds. This can include solids and gases as well as liquids.

Combustible—a chemical with a flash point greater than 100° F, but less than 200° F.

Compressed Gas—a gas in a container at 40 psi (absolute).

Evaporation Rate—the speed at which a material changes from a liquid to a gas state. Slow is less than 0.8 (water = 0.3). Fast is greater than 3.0 (methy ethyl ketone = 3.8).

Flammable Liquid—a liquid with a flash point of less than 100° F.

Flammable Solid—a solid that can be ignited readily. Spontaneously and water-reactive materials may be included in this category.

Flash Point—the lowest temperature at which enough vapors are present to provide a flammable mixture in the presence of an ignition source (for example, flames or sparks).

Hazardous—any chemical that is a physical hazard or a health hazard.

Health Hazard—a chemical that can be harmful to a person who has been exposed.

Melting Point—the temperature at which a solid turns into a liquid.

Oxidizer—a material that produces oxygen and initiates or promotes combustion in other materials.

Physical Hazard—a chemical that is a combustible liquid, a compressed gas, an explosive, a flammable, an oxidizer, or an unstable or water-reactive substance.

PPE—personal protective equipment: for example, safety glasses, gloves, respirators.

Solubility—the ability of a substance to mix with water.

Unstable—a chemical that will react under conditions of shock, pressure, or temperature.

Vapor Density—the weight of a gas compared to an equal volume of air. Heavier vapors tend to settle in low places where they may create fire or health hazards. Low density vapors, on the other hand, tend to rise, exiting the breathing zone more quickly than heavier density vapors.

Vapor Pressure—the pressure produced over a liquid. Consider volatile when it is greater than 5 or 6 mm Hg.

Volatile—the ability of a material to mix in air. Consider increased hazard when the percentage of volume that will evaporate exceeds 10%.

Water Reactive—a material that reacts with water to release a flammable or toxic gas.

Special Instructions

Use this page to note any special instructions from your supervisor.

play it SAFE...

1. Take safety training and safety rules seriously—they are designed to protect you.

2. Follow established job procedures to the letter when handling hazardous materials. Don't take shortcuts!

3. Know which types of safety equipment your employer requires you to wear and be sure to wear them every time you use or handle hazardous materials.

4. Make sure you keep yourself clean and your work clothing clean and in good repair.

5. Always wash thoroughly after working with hazardous materials, and never eat or smoke in an area where chemicals are stored or used.

6. Obey all warning signs—they are there for your protection.

7. Store hazardous materials safely. Make sure that these materials are securely stored according to company regulations. And make sure no containers are leaking.

8. Always dispose of hazardous substances and any materials contaminated by them in the manner required by your company.

9. Know the first-aid procedures to use in case of contact with or exposure to hazardous materials in your work area.

10. Know what to do in case of spills, leaks, explosions, or fire. Your quick response in an emergency can make a big difference.

HZB